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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,093	07/31/2001	Keith Rieken	9824-045-999	4453
38881	7590	04/20/2005	EXAMINER	
DARBY & DARBY P.C. P.O. BOX 5257 NEW YORK, NY 10150-5257			SHAH, NILESH R	
			ART UNIT	PAPER NUMBER
			2195	
DATE MAILED: 04/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/920,093

**Applicant(s)**

RIEKEN ET AL.

**Examiner**

Nilesh Shah

**Art Unit**

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-13 are presented for examination.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a). The following claim language is not clearly define:

- i. As per claim 1, line 6 it is unclear what optimal granularity is. (i.e. is it the optimal performance level, is there a certain percent that is optimal granularity, how is the optimal granularity determined?); line 12, it is unclear what the specific time-sliced architecture,(i.e. is FDM, CDMA, TDMA, GSA?)
- ii. As per claim 7, it has similar problems as stated above in claim 1.
- iii. As per claim 13, line 19, it is unclear what a despreaders is or how it is related to the invention? (i.e. it is a defragmenter for the cache?)

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Berg (5,920,607).

6. As per claim 1, Berg teaches the invention as claimed including a method for building a time-sliced architecture in a spread spectrum system, comprising the steps of:

(a). analyzing a set of applications, said analyzing including the steps of (col. 1, lines 55-65):

- (i) extracting real time aspects from each application in said set of applications (col. 3, lines 34-45; col.20, lines 63-67);

(ii) determining an optimal granularity based on said real time aspects (col. 4, lines 17-20; col. 4, line 40; col. 9, lines 54-67); and

(iii) adjusting said optimal granularity based on a context switching overhead (col. 4, lines 60-65; col. 6, lines 15-24; col. 9, lines 54-67, col. 10, lines 33-39); and

- (b) building a specific time-sliced architecture to accommodate said range of applications based on said analyzing (col. 1, lines 61-64; col. 5 lines 7-17; col. 5 lines 43-47; col. 9, lines 54-67).

7. As per claim 2, Berg teaches a method wherein said extracting includes the step of:  
profiling fundamental processing elements in each application in said set of applications  
(col. 3, lines 34-45; col.20, lines 63-67; col. 9, lines 54-67).
8. As per claim 3, Berg teaches a method, wherein said determining includes the step of:  
determining a lowest level of granularity needed for each application in said set of  
applications (col. 7, lines 2-6; col. 7, lines 20-33).
9. As per claim 4, Berg teaches a method wherein said adjusting includes the step of:  
performing a sensitivity analysis (col. 9, lines 54-67).
10. As per claim 5, Berg teaches a method wherein said performing includes the step of:  
determining an optimal trade-off between said context switching overhead and said  
optimal granularity(col. 3, lines 34-45; col.20, lines 63-67; col. 9, lines 54-67).
11. As per claims 7-11, they are rejected based on the same rejected as claims 1-5 above.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all  
obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention

was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 6, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berg (5,920,607) in view of Cai et al (6,349,363) (hereinafter Cai).

14. As per claim 6 and 12, Berg teaches the invention substantially as claimed including the use of analyzing a set of applications for the best performance level (col. 3, lines 34-45; col.20, lines 63-67; col. 9, lines 54-67).

15. Berg does not specifically teach the use of a cache.

Cai teaches determining a size for a data cache based on said extracting (col. 3, lines 1-5); implementing a hierarchical caching structure in said data cache (col. 9; lines 24-35); and applying said data cache in said specific time-sliced architecture (col. 12, lines 25-33). It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Cai and Berg because Cai use of a cache system would expedite data retrieval and usage of Berg system.

16. As per claim 13, Berg teaches the invention substantially as claimed including the use of analyzing a set of applications for the best performance level(col. 3, lines 34-45; col.20, lines 63-67; col. 9, lines 54-67).

Cai teaches a master control unit including a time slot table and a partial sums search table;

a data cache for receiving input data (col. 9, lines 16-24); and

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a cache for receiving data from the data cache(col. 9, lines 16-24,  
a data selector connected to an output of the cache (col. 11, lines 44-50; col. 9, lines 16-24);  
a despreaders connected to an output of the data selector (col. 8, lines 46-60), and  
a symbol integrator connected to an output of the despreaders(col. 8, lines 46-60).

***Response to Amendment***

17. Applicant arguments filed on 1/3/2005 regarding claims 1-13 had been considered but they are not persuasive.
18. Applicant states: (a) 35 U.S.C. 112 rejections are improper (b) Berg fails to teach a time-sliced architecture.
19. As per argument a) it is still unclear what optimal granularity is. (i.e. is it the optimal performance level, is there a certain percent that is optimal granularity, how is the optimal granularity determined?); it is still unclear what the specific time-sliced architecture,(i.e. is FDM, CDMA, TDMA, GSA?)
20. As per argument b) applicant defines a time sliced architecture as “an architecture in which multiple tasks are interleaved and performed simultaneously” in response filed 1/3/2005. Berg teaches an architecture that can handle multiple tasks at one time (col. 3 lines 34-45). Berg also teaches the use of multiple time sliced wireless standards (col. 5 lines 40-55).

### **Conclusion**

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nilesh Shah whose telephone number is (571)272-3771. The examiner can normally be reached on 9-5.
23. Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571)272-3756.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nilesh Shah  
Examiner  
Art Unit 2127

April 12, 2005  
NS

  
MAJID BANANKHAH  
PRIMARY EXAMINER